



UNITED STATES PATENT AND TRADEMARK OFFICE

lln

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/758,128 | 01/16/2004 | Yong-duk Lee | 1793.1162 | 5036 |

21171 7590 10/30/2006

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

| |
|----------|
| EXAMINER |
|----------|

GARCIA JR, RENE

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2853

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,128

Applicant(s)

LEE, YONG-DUK

Examiner

Rene Garcia, Jr.

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 and 35-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-32, 37 and 39-49 is/are allowed.
- 6) ☒ Claim(s) 33, 36 and 38 is/are rejected.
- 7) ☒ Claim(s) 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gast et al. (US 6,076,915) in view of Yoshida et al. (US 6,390,698).

Gast et al. disclose the following claimed limitations:

*regarding claim 33, method of correcting a printing error in an inkjet printer/**10/** (ABS) having a printer head/**60/**, on which nozzles/**64/** are provided, and a feed roller/**30/**, the method comprising: (fig. 1)

*moving the print paper/**media sheet, 12/** a first distance, and printing a reference line/**first portion test pattern, 105/** at a predetermined interval (figs. 1 and 10)

*moving the print paper/**12/** on which the reference line/**first portion test pattern, 105/** is printed a second distance, and printing comparison lines/**second portion test pattern, 104/** at a predetermined interval (fig. 10; col. 9, lines 34-48)

*detecting an error distance between the reference line/**105/** and one of the comparison lines/**104/** (col. 10, lines 29-49)

*correcting a distance that the print paper/**12/** is moved according to the detected error distance (col. 10, lines 44-49)

*first distance is a percentage of the width of the printer head (paper moves a distance; any movement of the paper at any distance is a percentage of the printer head width, either less than equal to or greater than equal to one-hundred percent)

Gast et al. does not disclose the following claimed limitations:

*regarding claim 33, determining if a trailing end of a print paper has escaped from the feed roller which periodically moves the print paper

*if the trailing end of the print paper is determined to have escaped from the feed roller

*regarding claim 38, exhaust roller moves the print paper the second distance

Yoshida et al. disclose the following:

*regarding claim 33, determining if a trailing end of a print paper/50/ has escaped from the feed roller/64/ which periodically moves the print paper/50/ (fig. 7 & 10) for the purpose of discharging the printed paper

*if the trailing end of the print paper/50/ is determined to have escaped from the feed roller/64/ (fig. 7 & 10) for the purpose of discharging the printed paper

*regarding claim 38, exhaust roller/paper discharging roller, 68/ moves the print paper/50/ the second distance (col. 5, lines 11-20) for the purpose of feeding the paper

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize a print paper escape detector which detects whether a trailing end of a print paper has escaped from the feed roller which periodically moves the print paper, and outputs the result of the detection as a first control signal; feed roller driving controller

Art Unit: 2853

which outputs a second control signal to move the print paper in response to the first control signal; and exhaust roller to move the print paper if a trailing end of a print paper has escaped from the feed roller as taught by Yoshida et al. into Gast et al. for the purposes of: discharging the printed paper; and feeding the paper.

3. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gast et al. (US 6,076,915) as modified by Yoshida et al. (US 6,390,698) as applied to claim 33 above, and further in view of Bloomberg (US 2002/0070998)l.

Gast et al. as modified by Yoshida et al. disclose the claimed limitations except for the following:

*regarding claim 36, second distance is equal to the first distance

Bloomberg disclose the following:

*regarding claim 36, second distance/offset/ is equal to the first distance/offset/ (paragraph 0025) for the purpose of reducing the effect of any misalignment in the location s of the various inkjets of the print head.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize the first distance is half the width of the printer head; and second distance is equal to the first distance as taught by Bloomberg into Gast et al. as modified by Yoshida et al. for the purpose of for the purpose of reducing the effect of any misalignment in the location s of the various inkjets of the print head.

Response to Arguments

4. Applicant's arguments filed 14 August 2006 have been fully considered but they are not persuasive. Applicant's arguments on page 14, top portion, express that Gast et al. (US

Art Unit: 2853

6,076,915) or Yoshida et al. (US 6,390,698) fail to teach *moving print media in relation to a width of a print head*. The broadest interpretation of the claim allows for one with ordinary skill in the art to realize that any movement of print media is a distance. While no explicit teaching regarding distance relating to print head width is taught in either Gast et al. or Yoshida et al., it is understood that any movement [distance] of the paper can be associated with a percentage of the print head. The claim recitation of “percentage of the width of the printer head” is broad and open to interpretation that any movement is therefore a percentage of the width of the printer head since no range or value has been recited to further limit the scope.

Allowable Subject Matter

5. Claim 37 is allowed.

The following is a statement of reasons for allowance:

The primary reason for the allowance of claim 37 is the inclusion of the method steps for correcting printing error that includes determining if a trailing end of a paper has escaped from the feed roller, moving a first distance and printing a reference line at a predetermined interval, then moving a second distance and printing comparison lines at a predetermined interval, second distance is equal to the first distance \pm the distance between neighboring nozzles divided by an integer p . It is these steps found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

6. Claim 35 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable subject matter of claim 35 is the inclusion of the method step of an inkjet printer that includes first distance is half the width of the printer head. It is this step found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

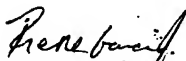
Art Unit: 2853


Communication with the USPTO

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rene Garcia, Jr. whose telephone number is (571) 272-5980. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Rene Garcia Jr
10/06


STEPHEN MEIER
SUPERVISORY PATENT EXAMINER